LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A cable television system for transmitting forward and reverse signals, the cable television system comprising a communications system comprising:

a plurality of optical nodes including a reverse optical transmitter, each optical node for receiving reverse analog electrical signals modulated onto radio frequency (RF) carriers from a plurality of subscriber equipment and for providing reverse digital optical signals, each reverse optical transmitter comprising:

a converter for converting the reverse analog electrical signals into digitized electrical reverse signals;

a RF carrier-detect circuit coupled to the converter for monitoring at least one of an input of the converter and an output of the converter, the RF carrier detect circuit providing a control signal in response to detecting the presence of a RF carrier signal in the reverse analog electrical signals;

a delay circuit coupled to the converter for delaying the digitized electrical reverse signals provided by the converter; ~~and~~

a switch coupled to receive the delayed digitized electrical reverse signals provided by the delay circuit, the switch being controlled by the RF carrier-detect circuit for selectively connecting the reverse optical transmitter with a digital network such that the reverse optical transmitter transmits the ~~digitized~~ reverse <u>digital optical</u> signals upstream through the digital network only if the carrier-detect circuit detects the presence of the RF carrier signal in the reverse analog electrical signals; and

a reverse optical receiver, coupled to the plurality of optical nodes via the digital network, for receiving and passively combining the reverse digital optical signals from each of the plurality of optical nodes.

2. (Canceled)

3. (Previously Presented) The system of claim 1, further comprising:

the reverse optical receiver coupled to the digital network for receiving the combined reverse digital optical signals, and for converting the combined reverse digital optical signals to analog electrical signals; and

a headend coupled to the reverse receiver for receiving and processing the analog signals,

whereby, due to a burst-mode transmission from each of the plurality of optical nodes, the digital network combines the reverse digital optical signals from the plurality of optical nodes using header identifier information that is controlled by the respective reverse optical transmitter.

4. (Previously Presented) The system of claim 3, wherein the cable television system that includes both a digital headend and an analog headend for generating and receiving combined digital optical signals in both the digital and the analog formats.

5. (Previously Presented) The system of claim 4, wherein the communications system further includes:

a descriminator circuit coupled between the digital network and the digital headend and the analog head end for analyzing the header identifier information contained in the passively combined reverse digital optical signals,

wherein dependent upon the header identifier information, the descriminator circuit provides the combined reverse digital optical signals from the digital network to one of the digital headend and the analog headend.

6. (Previously Presented) A communication system for transmitting and receiving optical signals over a communications medium, the communications system comprising:

subscriber equipment for transmitting reverse electrical signals;

a plurality of optical transmitters coupled to at least one of the subscriber equipment for converting the reverse electrical signals into reverse digital optical signals having a predetermined wavelength, wherein each of the plurality of optical transmitters comprising:

a converter for converting the reverse analog electrical signal to a reverse digital optical signal;

a carrier-detect circuit coupled to monitor reverse analog electrical signals at the input of the converter;

a delay circuit for preventing loss of information in the reverse signal due to the carrier-detect circuit; and

a switch, coupled to the delay circuit, the carrier-detect circuit controlling the switch, in response to the carrier-detect circuit detecting the presence of a reverse carrier signal in the reverse analog electrical signals, to allow the respective optical transmitter to transmit the reverse digital optical signal upstream through a digital network only when the carrier detect circuit detects the presence of the reverse carrier signal;

the digital network, coupled to each of the plurality of transmitters, for passively combining the reverse digital optical signals;

a receiver coupled to the digital network for converting the reverse digital optical signals back to the original reverse signals; and

a headend coupled to the receiver for processing the reverse signals.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The communications system of claim 6, wherein each of the plurality of transmitters formats the reverse digital optical signals as packets with associated identifier header information for identification within the headend.

10. (Previously Presented) The communications system of claim 9, wherein the communications system is a cable television system that includes both a digital headend and an analog headend.

11. (Original) The communication system of claim 10, wherein the communications system further comprises:

a descriminator circuit coupled to the digital network for analyzing the associated identifier header information,

wherein dependent upon the identifier header information, the descriminator circuit provides the packets to one of the digital headend and the analog headend.

12. (Original) The communications system of claim 6, wherein the communications medium is a hybrid fiber coaxial cable.

13. (Original) The communications system of claim 10, wherein a control system is used in connection with both the digital and the analog headends for preventing collision of the reverse signals.

14. (Previously Presented) The communication system of claim 6, wherein at least one of the plurality of optical transmitters further comprises an analog-to-digital converter for converting a reverse analog electrical signal to a digitized reverse electrical signal, wherein the optical transmitter converts the digitized reverse electrical signal to provide the reverse digital optical signal.

15. (Previously Presented) The communications system of claim 14, wherein the carrier-detect circuit is coupled to the output of the analog-to-digital converter.

16. (Previously Presented) A method for conducting reverse communications in a subscriber television system, comprising:

receiving at an optical transmitter reverse analog electrical signals from a plurality of subscriber equipment;

converting the reverse analog electrical signals to reverse digital optical signals;

transmitting the reverse digital optical signals upstream to a digital network only when the presence of a reverse carrier signal is detected by a carrier-detect circuit;

passively combining a plurality of the reverse digital optical signals received from a plurality of optical transmitters at a digital network; and

converting at a receiver the plurality of reverse digital optical signals back to a plurality of the reverse analog electrical signals.

17. (Previously Presented) The method of claim 16, further comprising converting an analog reverse electrical signal to a digitized reverse electrical signals by using an analog-to-digital converter, the presence of a reverse carrier signal being detected by the carrier-detect circuit continuously monitoring one of an input of and an output of the analog-to-digital converter.

18. (Previously Presented) The method of claim 16, wherein the reverse digital optical signal is formatted in packets and combining is performed using header identifier information contained in the packets.

19. (Previously Presented) The method of claim 16, wherein the plurality of reverse digital optical signals are transmitted at a common wavelength and combined at the common wavelength.

20. (Previously Presented) The method of claim 16, further comprising:

providing the reverse digital optical signals to one of an analog headend and a digital headend.

21. (Previously Presented) The method of claim 20, wherein the reverse digital optical signals are formatted in packets and provided to one of the analog headend and the digital headend based on analysis of packet header information by a descriminator circuit.

22. (Previously Presented) The method of claim 16, further comprising decombining the combined plurality of reverse digital optical signals without the use of wave division multiplexers.